REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

By this Amendment, Claims 1, 3, 4 and 14 are amended, Claims 26 and 27 are added, and Claim 5 is canceled without prejudice to or disclaimer of the subject matter recited therein. Thus, Claims 1-4 and 6-27 are pending in this application. Independent Claims 1 and 14 are amended to incorporate the subject matter of Claim 5. Support for new Claims 26 and 27 can be found, for example, on page 2, lines 30-33 and page 3, lines 27-34 of the specification. No new matter is added.

Claim 1 is amended to obviate the objection of this claim. Thus, withdrawal of the objection is respectfully requested.

The Official Action rejects Claim 6 under 35 U.S.C. §112, second paragraph. The rejection is respectfully traversed. Step d) of Claim 1 recites heating of the pulverous, polymeric material during one of steps a-c). Claim 6 recites heating the suspension of fluid and particles before step d) of Claim 1. Thus, Claim 6 is not indefinite, and further defines the scope of Claim 1. Therefore, withdrawal of the rejection is respectfully requested.

Independent Claims 1 and 14 are the only independent claims under consideration. Independent Claim 1 is directed to a method of providing a substrate with a coating layer of a polymeric material. The method comprises a) suspending a pulverous, polymeric material in a fluid, the polymeric material possessing a softening temperature and a melting temperature, b) pressurizing the fluid to produce a pressurized suspension, c) ejecting the pressurized suspension onto the substrate to form the coating layer, and d) heating the polymeric material, during any one of

the steps a)-c), to a temperature above the softening temperature of the polymeric material and below the melting temperature of the polymeric material.

Independent Claim 14 is directed to a device for providing a substrate with a coating layer of a polymeric material. The device comprises mixing equipment, arranged to suspend a pulverous polymeric material in a fluid; pressurizing equipment, arranged to pressurize said fluid; at least one nozzle operatively connected to the pressurizing equipment and arranged to eject the suspension of polymeric material in fluid towards the substrate; and heating equipment arranged to heat the polymeric material to a temperature above the softening temperature of the polymeric material and below the melting temperature of the polymeric material.

The Official Action rejects independent Claims 1 and 14 under 35 U.S.C. §102(b) over Coats, U.S. Patent No. 5,233,153.

Paragraph 11 on page 5 of the Official Action acknowledges that Coats fails to disclose, in combination with the other claimed features, heating the polymeric material, during any one of the steps a)-c) of Claim 1, to a temperature above the softening temperature of the polymeric material and below the melting temperature of the polymeric material, as now recited in independent Claim 1 and similarly recited in independent Claim 14. Thus, independent Claims 1 and 14 are patentable over Coats for at least this reason.

The Official Action takes the position that Singelyn, U.S. Patent No. 5,021,259, overcomes these deficiencies of Coats. Singelyn discloses a method of applying a thermoplastic coating to a surface in which polymer particles are heated to soften the particles without melting the particles (see Abstract). The Official Action takes the position that Singelyn discloses heating the polymer particles above the

softening temperature and below the melting temperature. However, it would not have been obvious to one of ordinary skill in the art to combine the method of Singelyn with the method of Coats to result in the step of heating the polymeric material, during any one of the steps a)-c) of Claim 1, to a temperature above the softening temperature of the polymeric material and below the melting temperature of the polymeric material, as recited in independent Claim 1 and similarly recited in independent Claim 14.

Singelyn discloses a method for applying a thermoplastic polymer coating to a surface to create a semi-fused, highly porous coating (see col. 2, lines 22-27). To achieve the highly porous coating, Singelyn discloses that the flame temperature heating the thermoplastic particles should *prevent* melting of the thermoplastic particles (see col. 3, lines 26-30 and 37-39). On the other hand, Coats discloses a method in which a polymer composition is heated by a plasma jet 92 to melt the polymer composition as it is ejected from the exit nozzle 96 (see, e.g., Abstract; col. 1, lines 6-12; col. 4, lines 17-23). In particular, Coats discloses that the temperature of the plasma jet is controlled to be sufficiently high to melt the polymer composition to provide a coating that is void-free (see col. 3, lines 27-35 and col. 4, lines 3-23). Thus, in Coats's method the polymer composition is melted to provide a coating that is void-free, while Singelyn teaches against melting of the thermoplastic particles to create a semi-fused, highly porous coating. Accordingly, modifying Coats' method to prevent melting of the polymer composition, as disclosed by Singelyn, would not achieve a coating that is void-free as specifically described by Coats. That is, the modification proposed by the Official Action would render Coats' polymer composition unsatisfactory for its intended purpose (MPEP §2143.01(V)). One

skilled in the art would not make such a modification of Coats' method. The Office Action fails to consider the references and claims as a whole and relies on impermissible hindsight using knowledge gleaned only from Applicant's disclosure (see MPEP §2145(X)(A)). Thus, it would not have been obvious to one of ordinary skill in the art to combine the method of Singelyn with the method of Coats to result in the step of heating the polymeric material, during any one of the steps a)-c) of Claim 1, to a temperature above the softening temperature of the polymeric material and below the melting temperature of the polymeric material, as recited in independent Claim 1 and similarly recited in independent Claim 14. Therefore, independent Claims 1 and 14 are patentable over the combination of Coats and Singelyn.

Claims 2-4, 6-13 and 15-25 are patentable over the applied references at least by virtue of their dependence from patentable independent Claims 1 and 14, respectively, as well as for the additional subject matter these claims recite. For example, dependent Claim 15 recites that the heating equipment is one heating equipment and the device comprises additional heating equipment arranged upstream of the one heating equipment to heat the fluid and/or suspension of polymeric material in fluid. Although the Official Action takes the position that these features are disclosed by Coats, the only "heating equipment" disclosed by Coats to heat the polymer composition is the plasma gun 4. Coats fails to disclose additional heating equipment arranged upstream of the plasma gun 4 to heat the polymer composition.

Dependent Claim 19 recites that the suspension is heated in step a of Claim 1 (during suspension of the pulverous, polymeric material in a fluid) or step b (during

pressurization of the fluid). Coats discloses that the polymer composition is heated only as the composition exits the nozzle 96 (which the Official Action says corresponds to the claimed step c)). The Official Action acknowledges that the subject matter recited in Claim 19 is not explicitly disclosed by Coats, but states that it would have been obvious to modify the method of Coats to heat the polymer composition during either of steps a) or b) of Claim 1. Specifically, the Official Action takes the position that it would have been obvious to provide heating closer to the location where the powder is entrained in the pressurized gas stream to cause the melting effect (see page 5 of the Official Action). Applicant respectfully disagrees.

Coats' plasma gun 4 and nozzle 96 are specifically configured to heat the polymer composition as the polymer composition exits the nozzle 96. For example, Coats discusses the importance of the angle of the nozzle 96 with respect to the axis of the plasma jet 92 (see col. 6, line 59 to col. 7, line 13). There is no evidence that it would have been obvious to relocate the plasma gun 4 so that the flame of the plasma jet 92 would heat the polymer composition before the composition exits the nozzle 96 (i.e., while the polymer composition is still in the conduit 88 or the powder feeder 72). Moreover, such a modification would be undesirable to one skilled in the art because the flame of the plasma jet 92 would appear to cause heat damage to the conduit 88 and the components of the powder feeder 72. Thus, it would not have been obvious to modify the method described in the patent to Coats to provide heating closer to the location where the powder is entrained in the pressurized gas stream.

New Claims 26 and 27 are presented for consideration. Claim 26 recites that the coating layer of polymeric material is homogeneous and continuous. On the

other hand, Singelyn discloses using a relatively cool flame to soften the particles passing through the flame such that they adhere to each other without melting into a homogeneous layer (see col. 3, lines 52-55). Coats fails to overcome the deficiencies of Singelyn. Claim 27 recites that the fluid is pressurized to a pressure of about 100 bar. Neither of the applied references discloses aspect of the method. Thus, Claims 26 and 27 are patentable over the applied references for at least these reasons, as well as for their dependency from patentable independent Claim 1.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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Date December 8, 2008

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